Social Security's Rate of Return

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What can Americans expect in future Social Security retirement benefits? The Heritage Foundation's work on this subject indicates that the Social Security system's rate of return for most Americans will be vastly inferior to what they could expect from placing their payroll taxes in even the most conservative private investments. For the low-income African-American male age 38 or younger, the news is particularly grim: He is likely to pay more into the Social Security system than he can ever expect to receive in benefits after inflation and taxes. Staying in the current system will likely cost him up to $160,000 in lifetime income in 1997 dollars.

If Americans were allowed to direct their payroll taxes into safe investment accounts similar to 401(k) plans, or even super-safe U.S. Treasury bills, they would accumulate far more money in savings for their retirement years than they are ever likely to receive from Social Security. For example:

Social Security pays a very low rate of return for two-income households with children. Social Security's inflation-adjusted rate of return is only 1.23 percent for an average household of two 30-year-old earners with children in which each parent made just under $26,000 in 1996.[1] Such couples will pay a total of about $320,000 in Social Security taxes over their lifetime (including employer payments) and can expect to receive benefits of about $450,000 (in 1997 dollars, before applicable taxes) after retiring at age 67, the retirement age when they are eligible for full Social Security Old-Age benefits.[2] Had they placed that same amount of lifetime employee and employer tax contributions into conservative tax-deferred IRA-type investments—such as a mutual fund composed of 50 percent U.S. government Treasury bills and 50 percent equities—they could expect a real rate of return of over 5 percent per year prior to the payment of taxes after retirement. In this latter case, the total amount of income accumulated by retirement would equal approximately $975,000 (in 1997 dollars, before applicable taxes).

The rate of return for some ethnic minorities is negative. Low-income, single African-American males born after 1959 face a *negative* real rate of return from Social Security. For every dollar he has paid into Social Security, a low-income, single African-American male in his mid-20s who earned about 50 percent of the average

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[1]This rate of return calculation assumes that both adults were born in 1967.

[2]Total taxes paid and benefits received are expressed in 1997 inflation-adjusted dollars. Social Security taxes are defined as Old-Age and Survivors Insurance (OASI) contributions, less (where applicable) an amount which would buy a life insurance policy equivalent to the value of the coverage provided by (pre-retirement) Survivors Insurance. In 1997, the tax rate for OASI is 10.7 percent of all wages and self-employment income less than $65,400, as of year-end 1997. Unless stated otherwise, a discount rate is not applied to these amounts.

wage, or $12,862, in 1996 can expect to get back less than 88 cents. This negative rate of return translates into lifetime cash losses of $13,377 (in 1997 dollars) on the taxes paid by the employer and employee.

African-American females typically live longer than their male counterparts, yet even they have a rate of return lower than the general population. An African-American single mother 21 years old who in 1996 made just under $19,000 (the average for African-American females) can look forward to a real rate of return on her Social Security taxes of only 1.2 percent. Under conservative assumptions, if she had saved those same tax dollars in a private investment account composed of government bonds, she would have received a real return of around 3 percent per year. With a mixed portfolio of bonds and equities, she could expect a return on her investments of at least 4.35 percent. This means that even with a low risk/low yield portfolio composed entirely of Treasury bills, this single mother could have generated at least $93,000 more in retirement income (in after-tax 1997 dollars) than she would enjoy under Social Security.[3]

The rate of return has a damaging impact on communities. The cumulative effects of Social Security's dismal rates of return can be appreciated by considering a hypothetical community. Suppose there existed a city entirely of 50,000 young, married double-earner couples in their thirties, with each person earning the average wage, and each couple had two children. The cumulative amount such a community could save in a private pension plan by retirement with the same dollars they currently pay in Social Security taxes is over $26 billion *greater* than these couples will get in Social Security benefits. This amount is roughly equal to the amount the federal government currently spends on food stamps each year for the whole nation, and nearly as much as direct federal spending on education.[4]

WHY RATES OF RETURN MATTER

The defenders of Social Security argue that rates of return are irrelevant to the Old-Age and Survivors Insurance (OASI) portions of the program. Social Security, they suggest, was intended to provide a basic but decent retirement income to beneficiaries and stop-gap incomes for surviving spouses. Future Social Security beneficiaries, they argue, should be saving now for additional retirement income to supplement benefits from the Old-Age and Survivors Insurance. Thus, they argue that comparing rates of return on private pension investments with those from a public program intended to pay out during retirement at least 35 percent of the wages an average worker earned prior to retirement is

[3] Assuming that upon retirement this single woman is able to annuitize the lump sum at retirement that she accumulated at a real interest rate of 2.7 percent over 15 years. The current federal income tax rates (with current rate structure, exemptions, tax bands, and deductions adjusted by inflation as mandated in current legislation) are applied against this annuity income.

[4] Scott A. Hodge, ed., *Balancing America's Budget: Ending the Era of Big Government* (Washington, D.C.: The Heritage Foundation, 1997).

like comparing apples with oranges.[5]

This line of reasoning contains a fundamental flaw. If Social Security taxes were low enough to allow workers to save these additional dollars for their retirement, apologists for the system might conceivably be correct in characterizing Social Security as a pension program of last resort. But Social Security taxes are not low, and they are crowding out the ability of most low- and middle-income Americans to save for retirement. Thus, the rate of return on these taxes is very important, especially for those Americans for whom Social Security is their main retirement savings.

Crowding Out Savings. As payroll taxes have risen, many more Americans have few dollars left over for supplemental retirement investment. Over the past 25 years, Congress and the President have increased Old-Age and Survivors benefits so often and so much that today the high payroll taxes needed to pay those current benefits crowd out private retirement investments.[6] In 1972, the average worker (with his or her employer) paid 8.1 percent in Old-Age and Survivors payroll taxes on the first $9,000 of wages and salary (equivalent to about $21,500 in 1997 dollars);[7] in 1997, that worker paid 10.7 percent on the first $65,400 of "earned" income (or the first $27,340 in 1972 dollars).[8] Moreover, between 2020 and 2046, the Old-Age and Survivors tax rate will have to rise to 14.4 percent from today's 10.7 percent if benefit costs are not cut.[9]

Because of rising payroll taxes for retirement, increasing numbers of poor and middle-income workers do not have the after-tax funds needed to create private supplemental pension investments.[10] In fact, Social Security taxes now consume as much of the average family's budget as do outlays for housing, and nearly three times more than annual health care expenses.[11]

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[5]See Social Security Administration, "Findings and Recommendations," *1997 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, Communication from the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, House Doc. 104-228 (Washington, D.C.: U.S. Government Printing Office, 1997), Table R1, p. 36.

[6]See Martin Feldstein, "The Missing Piece in Policy Analysis: Social Security Reform," *A.E.A. Papers and Proceedings*, May 1996, pp. 1–14.

[7]Social Security Administration, *1997 Annual Report of the Board of Trustees*, Table II.B1, pp. 34–35. The percentage of wages and salaries taxed to support the Old-Age and Survivors and Disability Insurance programs (Social Security taxes) equals the 50 percent paid directly by the employee plus the 50 percent paid by the employer on the employee's behalf. The employer's half comes from wages the family would have earned had there not been a payroll tax.

[8]Taxable threshold levels for 1972 and 1997 adjusted by the index value for the Consumer Price Index—All Urban Series. See *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, 1997), Table B-58, p. 365.

[9]Heritage Foundation estimates based on data from the Social Security Administration's *1997 Annual Report of the Board of Trustees*, Table II.F14, p. 112.

[10]This is complicated by the decreasing number of firms that provide company pensions to their workers. Rising taxes of all kinds, costly regulations, and increasing pressures on the bottom line have led many firms away from the practice of providing pensions for long-time employees.

[11]Data on average family consumption expenditures from U.S. Department of Labor, Bureau of Labor Statistics, "Consumer Expenditures in 1995," June 1997, Table A. This report estimates average family income before taxes to be $36,918. Heritage analysts added $2,289 to reflect additional wages the average

Because of the long-term financial problems of the Social Security trust fund, calculations of the rate of return for Social Security are likely to prove optimistic. The fact is that Social Security will not be able to pay out old-age benefits to the "Baby Boom" generation without additional tax increases on workers or benefit cuts. These tax increases or benefit cuts will further reduce the Social Security rates of return for those workers currently in their twenties, members of the so-called Generation X, and their children. As Social Security's rates of return fall, the relevance of rates of return on private pensions rises. That is, members of Generation X are not simply going to ignore the decaying prospects for adequate income during their retirement years. Rather, they will insist increasingly on more opportunities for creating pensions to supplement Social Security's Old-Age benefits. Thus, comparing rates of return for private and public pensions will become even more important to each new generation.

In addition, the rate of return is important because the crowding-out effects of high Social Security taxes on private savings for low- and middle-income workers affect the wealth that can be left to the next generation. Few aspects of Social Security are as unintended or as damaging to low- and middle-income workers as the squeeze that high payroll taxes put on the formation of intergenerational wealth transfers. The inability of poor workers to accumulate enough savings to leave a nest egg to their children can mean that their children will be as dependent as their parents could be on their monthly Social Security check. It means that poor communities will not have as much "home grown" capital with which to create new jobs and sources of income. Without these new jobs and income, members of the next generation will be less able to save for retirement than they could be. Thus, by taxing away one generation's opportunity to help the next generation start earning at a higher level, the Social Security system acts as a drag on future generations.

How a Small Difference in Returns Means Big Differences in Cash

The power of compound interest over a career can translate even small differences in the rate of return into large swings in lifetime savings. For example, the expected annualized real rate of return for Social Security is 1.2 percent for an average-income, 21-year-old African-American single mother of two who throughout her lifetime makes about 100 percent of the average earnings for African-American female workers ($18,650 in 1996).[12]

Had she been allowed to invest her payroll taxes in highly conservative investments, she could expect to make a 3 percent real rate of return on a portfolio consisting entirely of Treasury bills, or a 4.35 percent real rate on a portfolio of 50 percent Treasury bills and 50 percent equities.

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worker would receive if the employer's share of Social Security was converted to wages.

[12]The Social Security Administration's "Average Wage Index" as defined in the *1997 Annual Report of the Federal Old-Age and Survivors and Disability Trust Funds*, Table III.B1, p. 178. A ratio of 72.5 percent of average earnings is assumed for the African-American single mother, which was the proportion of average earnings made by African-American females at the end of 1996 as reported in U.S. Department of Labor, "Usual Weekly Earnings of Wage and Salary Workers, Fourth Quarter, 1996," January 24, 1997, Table 1.

Investing her taxes entirely in Treasury bills would give her an annualized rate of return that is almost two percentage points higher than she could expect from Social Security, and allow her to earn—during her lifetime—$93,330 more in terms of inflation-adjusted, after-tax 1997 retirement income than she can expect to receive in Social Security benefits.

Investing in the mixed equity/bond portfolio would yield a rate of return 3.14 percentage points greater than she could receive from Social Security and would allow her to accumulate by retirement a lump sum that, in after-tax 1997 dollars, is $192,073 more than her lifetime projected value of Social Security benefits.

Cumulative Effect on Communities. Although a low rate of return on rising Social Security taxes reduces the potential retirement savings of individual households, it is important to appreciate the cumulative effect this has on communities. In both rich and poor communities, less money accumulated in each household for retirement years means less money in the community not just for living expenses, but also for new businesses, for sending children to college, and generally for giving the next generation a more secure financial foundation. In short, each succeeding generation in a community is weakened financially by a poor rate of return from Social Security.

For a very rough picture of the cumulative impact on a community, consider a hypothetical small community of 200,000 residents. In this imaginary community, there are 50,000 families of four; all the parents are age 30; and both parents work, earning the average wage of $26,000 (in 1997 dollars). Assume that nobody migrates into or out of this neighborhood. In this greatly simplified hypothetical community, the difference between the lifetime amount of savings the parents would accumulate by placing their Social Security tax dollars in conservative portfolios and the amount actually obtained from Social Security would be approximately $26 billion in 1997 dollars (based on family cases analyzed later in this study). This is the savings they must forego due to the failing Social Security tax system and, in effect, is money drained from their community during their working years.

To be sure, this example is completely fictitious, and actual calculations for real communities would vary widely. But this example serves to illustrate that the deficiencies of Social Security for individual households imply a significant impact on the long-run financial health of American communities.

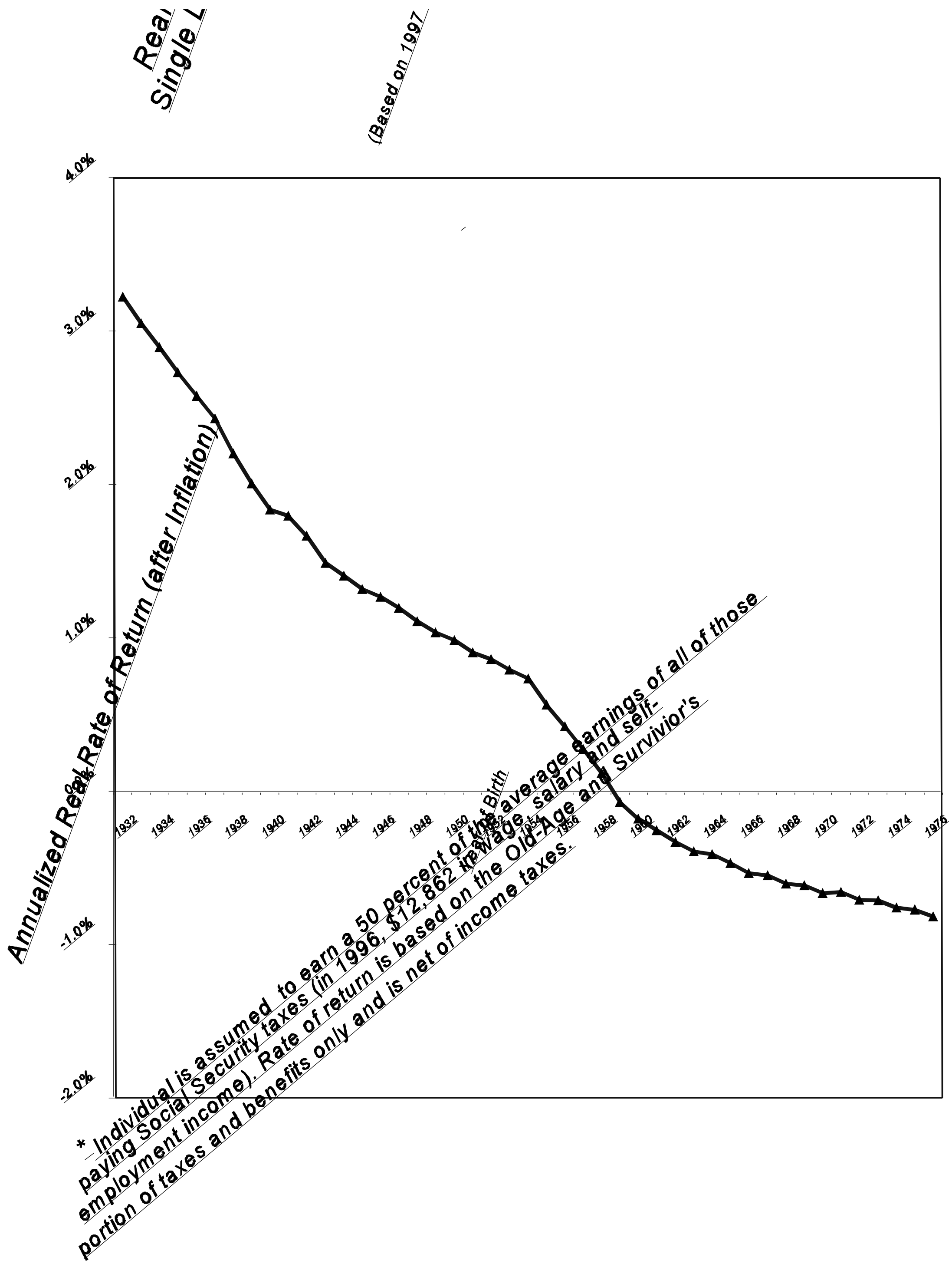
SOCIAL SECURITY AND AFRICAN-AMERICANS

Due to generally lower life expectancies, African-Americans experience particularly poor rates of return from Social Security. This means, among other things, that Social Security taxes impede the intergenerational accumulation of capital among African-Americans, a group which has found it difficult to acquire capital. In fact, even under the most optimistic assumptions, Social Security taxes actually shrink the lifetime net earnings of some of the least advantaged members of the community.

Despite efforts to transfer resources toward low-income individuals through Social Security, low-income African-American males realize particularly dismal rates of return from Social Security, even under the most favorable assumptions. Chart 1 shows the real rate of return from Social Security for African-American males who earn what the Social Security Trustees call “low-income” annual earnings throughout their life—about $12,862 in 1996. Chart 1 also illustrates how the best intentions of Social Security’s defenders to help low-income minorities are frustrated by the program’s dismal rates of return.[13]

Chart 1

[13]Indeed, life expectancy for this African-American male is likely to be lower than the one used. Life expectancy is closely related to earnings, and while the average African-American male worker in the last quarter of 1996 had earnings of 82.8 percent of the national average, the above worker has only earnings of 50 percent of the average. See footnote 12, *supra*.


Real
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3.0%
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1.0%
0.0%
-1.0%
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Annualized Real Rate of Return (after Inflation)
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* Individual is assumed to earn a 50 percent of the average earnings of all of those
paying Social Security taxes (in 1996, $12,862 in wage, salary and self-
employment income). Rate of return is based on the Old-Age and Survivior's
portion of taxes and benefits only and is net of income taxes.

An African-American, low-income single male born in 1932 and retiring today can expect a rate of return of approximately 3.23 percent on his lifetime contributions. However, this rate of return falls for younger African-American males. Indeed, the expected rate of return from Social Security for those born after 1959 is negative. This means that a typical, low-income African-American male 38 years old or younger can expect to pay more into the Social Security system than he will likely receive after inflation and federal income taxes. Put another way, this person's lifetime purchasing power, or the ability to buy the same goods and services in retirement that he buys today, actually shrinks as a result of his participation in the Social Security program.

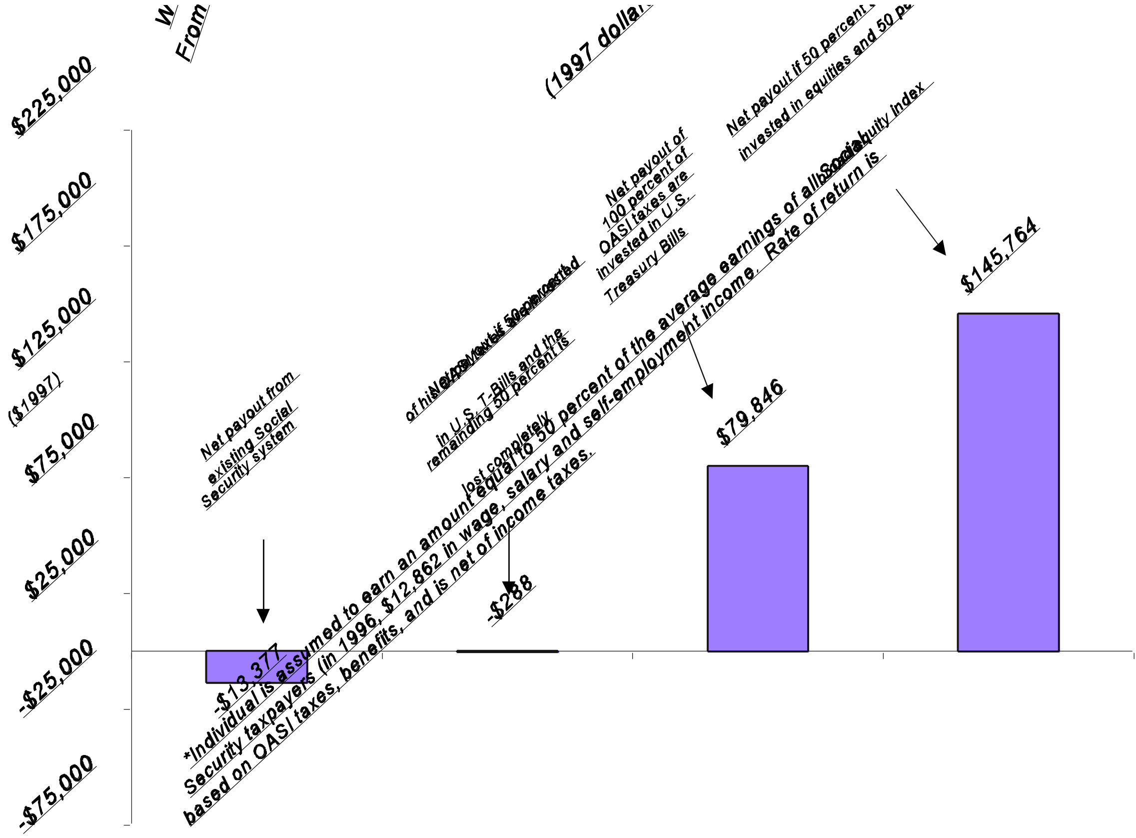
To gauge how much of his purchasing power this future retiree may forego by staying in Social Security, the authors calculated the amount of money that a 25-year-old, low-income African-American male could accumulate by retirement if he invested his payroll taxes privately. This inflation-adjusted sum was compared with the amount he can expect to receive from Social Security, all in 1997 dollars.

Three scenarios for alternative rates of return are presented in Chart 2. Both examine the after-federal-income tax benefits, assuming the contributions were placed in a tax-deferred IRA-type account.[14] The first scenario assumes that the worker invests 50 percent of his taxes in U.S. Treasury bills and 50 percent in a broad equity index. The second scenario assumes that all payroll taxes are invested entirely in T-bills. The third scenario assumes the worst case: that he invests 50 percent in U.S. Treasury bills and loses all of the remaining half in bad investments.

As Chart 2 shows, the current Social Security system can be expected to shrink this individual's net lifetime income by $13,377 in terms of 1997 dollars. He is likely to fare better, even if he were to lose half of his invested tax dollars completely, by an amount of $13,089, compared with Social Security's rate of return.

[14]The amounts below assume that the worker pays out the amount he has accumulated in an annuity over his lifetime and receives an interest rate of 27 percent. The current federal income tax rates (with current rate structure, exemptions, tax bands, and deductions adjusted by inflation as mandated in current legislation) are applied against this annuity income.

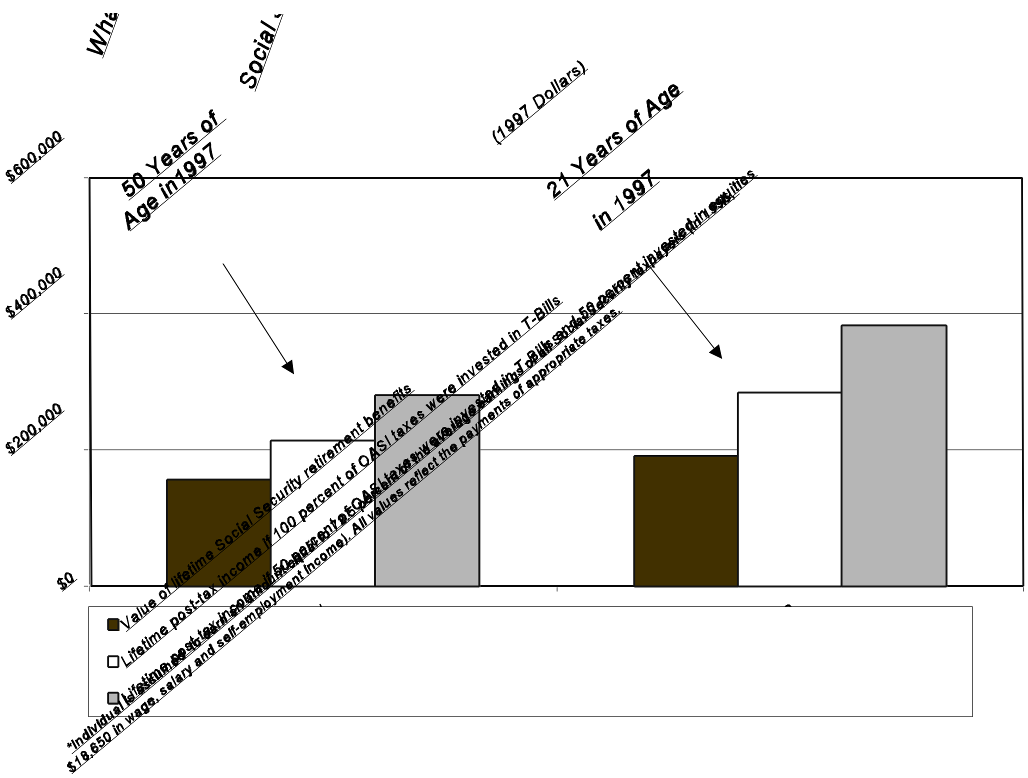
Chart 2



Moving beyond the extreme worst-case outcome, the results are even more striking. Under conservative assumptions, a 100 percent T-bill portfolio will result in an increase in a lifetime income net of taxes of $79,846, while a 50 percent bond/50 percent equity portfolio will likely result in a net increase in post-tax lifetime income of $145,764.

The nature of the current Social Security system also imposes a heavy burden on single-parent families. Chart 3 illustrates some of the total lifetime costs experienced by two typical African-American single mothers of different ages but each earning an annual salary of $18,650 in 1996. The expected total Social Security benefits are presented in the chart, as well as the amount that each woman would have accumulated by retirement had she been able to invest her Social Security taxes under two sets of assumptions: (1) an “ultra-conservative” portfolio in which all of her taxes were invested in U.S. Treasury bills, and (2) a portfolio in which 50 percent was invested in Treasury bills and 50 percent in a broad equity fund.

Chart 3



In return for a lifetime of contributions to Old-Age and Survivors Insurance, the 50-year-old single mother can expect to receive, on average, $155,903 in Social Security benefits while a 21-year-old can expect to receive $190,767. In each case, private strategies yield much higher returns than Social Security. An ultra-conservative investment program in which all of their savings are invested in long-term government bonds would yield post-tax lifetime amounts of $213,220 and $284,098 for the 50-year-old and 21-year-old, respectively—a net gain over Social Security of $57,317 and $93,330.[15]

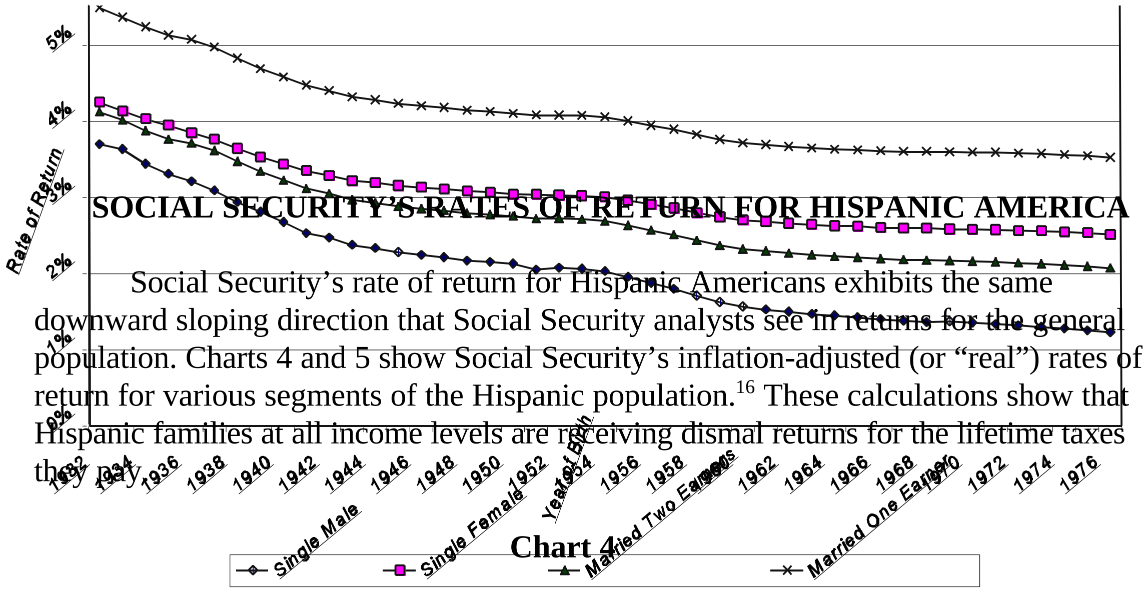
The gains from a prudently mixed portfolio of bonds and equities are even greater. Had their taxes been invested in a mixed portfolio of 50 percent bonds and 50 percent equities, the 50-year-old would receive at least $280,016 in lifetime post-tax income and the 21-year-old would receive $382,840 (in 1997 dollars). This represents, respectively, $124,113 and $192,073 more than they could expect to receive from Social Security.

[15]The current federal income tax rates (with current rate structure, exemptions, tax bands, and deductions adjusted by inflation as mandated in current legislation) are applied against this annuity income.

SOCIAL SECURITY'S RATES OF RETURN FOR HISPANIC AMERICA

Social Security's rate of return for Hispanic Americans exhibits the same downward sloping direction that Social Security analysts see in returns for the general population. Charts 4 and 5 show Social Security's inflation-adjusted (or "real") rates of return for various segments of the Hispanic population.[16] These calculations show that Hispanic families at all income levels are receiving dismal returns for the lifetime taxes they pay.

Chart 4



Defenders of Social Security often argue that low-income workers are especially benefited by Old-Age and Survivors benefits. But are they? Does Social Security give

[16] Heritage analysts reduced all rates of return and related calculations presented in this paper by the annual inflation rates for years between 1997 and 2040. This adjustment to rates of return, Social Security benefits, and privately managed savings means that the reader is always shown sums and earnings ratios in terms of a dollar's purchasing power today. Thus, the statement "Social Security will pay out an annual amount of $17,000 in the year 2040" means that the program will pay enough to allow a beneficiary to purchase then what $17,000 will purchase now. In order for a beneficiary to have that much "purchasing power" in the year 2040 as they have today, Social Security will actually have to send this person around $100,000 annually. The difference in the two amounts is explained by the effects of inflation on the dollar's value, or by what a dollar will buy in 2040 after years of decreasing in value due to inflation.

these Americans a decent return on all of the taxes they pay over a lifetime of work?[17]

As Chart 4 indicates, a low-income household will likely receive at best a mediocre and at worst a poor real rate of return from Social Security, despite the fact that Social Security's formulae are expressly designed to redistribute income towards those with low incomes. Single-earner low-income workers fare best if they were born before 1935 and, consequently, paid much lower lifetime payroll taxes than much younger workers. However, even the best-case rate of return (five percent for a single-earner couple with children where the worker was born in 1932) lies below a conservative estimate of what economists have estimated to be the long-range real rate of return to equities. Every other low-income group lies below this rate of return, or well below the rate of return of those Americans with opportunities to invest for the long-term in stocks and bonds.

Double-earner, low-income families and single males and females fare badly under Social Security. Low-income single males are particularly hard-hit due to a lower male life expectancy. The expected real rate of return from Social Security for low-income males falls from a high of 3.7 percent for those born in 1932 to 1.2 percent for those born in 1976; well below what could be delivered from a prudent private investment portfolio.

[17] A low-income earner is defined by the Social Security Administration as someone who earns fifty percent of the average wage and self-employment income earned by all workers covered by Social Security. In 1996, a person defined as low income by the Social Security Administration earned approximately $12,861 per annum.

Chart 5

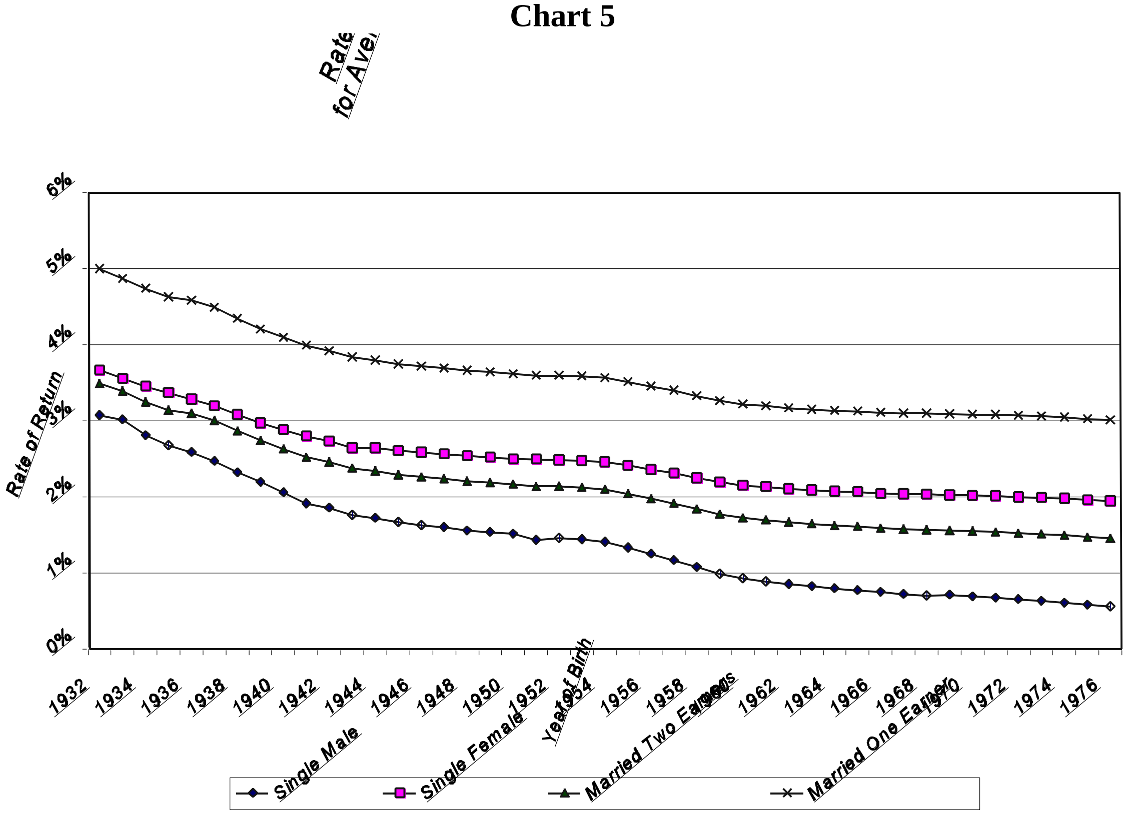


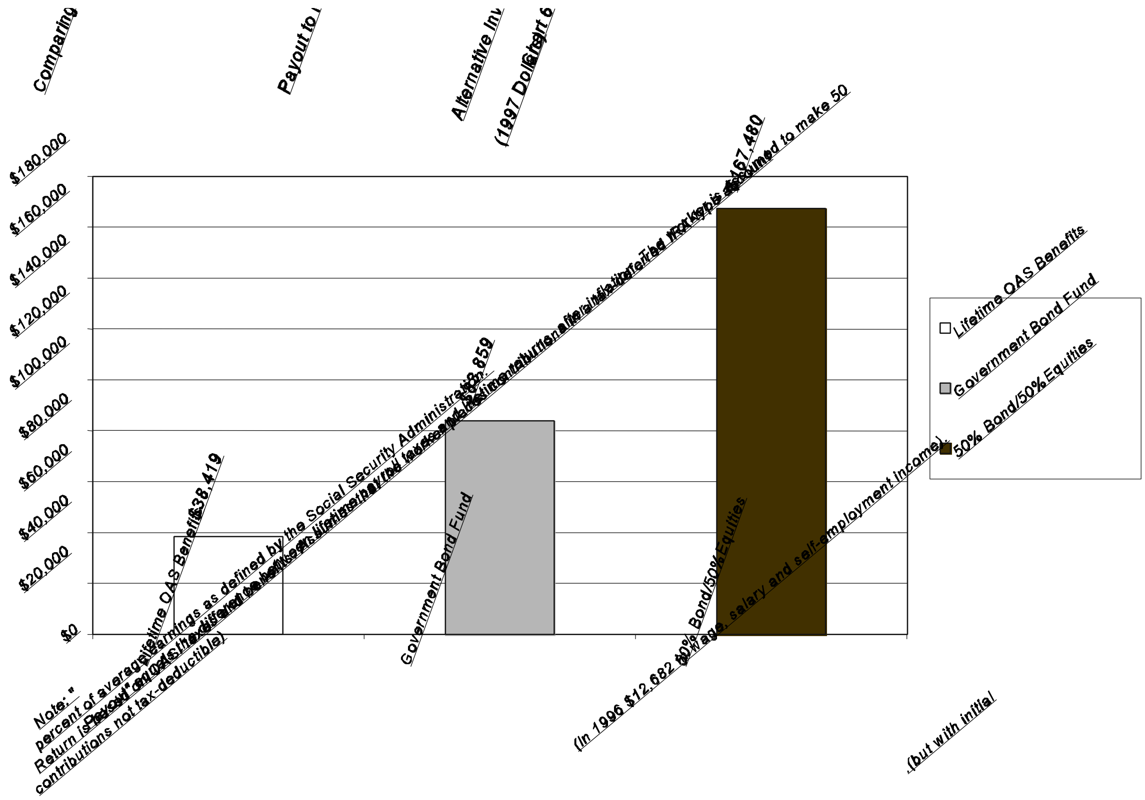
Chart 5 shows rates of return for average-income families.[18] All of the groups fare badly under Social Security relative to the return that they could receive from a conservative, private investment portfolio. A married couple with two children and a single earner fare best, receiving five percent if born in 1932. This expected rate of return falls gradually to three percent for those born in 1976. As in the low-income case, single males fare worst of all. An average earning, single Hispanic male born after 1966 can expect to receive an annualized real rate of return of less than .8 percent (that's less than eight-tenths of one percent on lifetime payroll taxes).

WHAT DO THESE RATES OF RETURN MEAN IN DOLLAR TERMS?

Due to the power of compound interest, even what appears to be a relatively small deviation in the real rate of return can have significant implications for a family's lifetime, accumulated wealth. In order to analyze the dollar implications of Social Security's lower rate of return, Heritage analysts calculated the inflation-adjusted differences between Social Security's benefits for a single, low-income Hispanic male and what a fairly

[18] An average income family is defined by Social Security, as one in which the earners receive the average wage earned by all of those covered by Social Security. In 1996, the earners in such a family are estimated to have received $25,723.

conservative investor could accumulate by retirement from a portfolio split equally between long-term U.S. Treasury Bills and broad market equity funds.



As Chart 6 indicates, staying in the Social Security may be the most risky retirement plan that low-income, single males can follow. This worker is much better advised to put all of his Social Security taxes in a low-yield government bond fund. At least he will accumulate about twice what he paid in. He's even better advised to imitate 401k plans, and place part of his payroll taxes in bonds and part in stock funds.

CONCLUSION

When the Social Security system began, its aim was to help ordinary Americans and those in disadvantaged positions to have adequate financial security in their retirement years. However, as this analysis has shown, the current Social Security system may actually decrease the lifetime well-being of many socioeconomic groups, even under the most favorable assumptions. Among the groups who will lose out under the current system are single mothers, low-income single males, average-income married couples with children, and even affluent professionals. Indeed, many ordinary Americans already understand that the Social Security system is a bad deal. Recent surveys have shown that many workers expect to pay more, in real terms, into the system than they ever expect to receive in retirement benefits.[19]

This analysis of the Social Security system almost certainly underestimates its total economic costs. It makes no attempt, for instance, to include the benefits from faster economic growth, higher wages, and increased employment generated by a retirement program in which individuals are allowed to invest their Social Security tax dollars and build the wealth necessary to sustain them in their old age.

Although the debate on Social Security reform at times may focus on technical terms (such as the "replacement ratio" and the trust fund's "long-range actuarial balance") which mean little or nothing to ordinary American families, there is little doubt that the outcome of the debate will be profoundly important to them. For example, whether or not the current system will continue to exist—perhaps sustained by benefit cuts and tax increases—is a matter of great concern to the 21-year-old African-American single mother described earlier. Under a system where she could invest her own tax dollars, this woman perhaps could accumulate enough to buy an annuity upon retirement that would pay about $28,800 a year after taxes,[20] almost twice what she would receive from Social Security, or an annuity equal to her Social Security retirement benefits and pass on the remainder, around $200,000, to her children.

But this debate is also a concern to the thirty-something married couple who earned a combined income of $52,000 in 1996 and struggle to put away enough for retirement while paying over one-eighth of their income into a Social Security system that is likely to yield a real return of less than 1.7 percent on their contributions. Moreover, it will influence the life of people, perhaps not yet born, who quite possibly could become employed by a business that is created by the retirement investment of the young high-income New York couple.

For almost every type of worker and family, retirement under Social Security means receiving fewer dollars in old age and passing on less wealth to the next generation than they could if allowed to place their current Social Security tax dollars in private retirement investments.

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[19]See Michael Tanner, "Public Opinion and Social Security Privatization," Cato Project on Social Security Privatization S.S.P. No. 5, August 6, 1996.

[20]Based on an interest rate of 2.7 percent and a lifetime expectancy of 15 years.